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December 14, 2017

Chairman of the Senate
University of Rwanda
Kigali, Rwanda

Re: Evaluation report for the proposed MSc Program in Energy Economics

I have received a request from the Rwanda Utilities Regulatory Authority (RURA) to perform a peer review of the program for a Master of Science degree in Energy Economics to be taught at the University of Rwanda. The aim of this educational activity is to train a critical mass of professionals in the technical, regulatory and strategic skills required for the continued development of the energy sector on the African continent.

My evaluation is based on the documents “Master of Science in Energy Economics Degree: Programme Specification” and “Master of Science in Energy Economics Degree: Module Descriptions” dated July 2017.

For the last ten years, I have been the director of Energy Studies for the Public Utility Research Center (PURC) at the University of Florida. I am responsible for promoting research and outreach activities in energy regulation and policy. I develop research strategies that inform the academic community and practitioners on emerging issues and best practices and serves as an expert resource for regulatory professionals, policymakers, and service providers in Florida and around the world. I conduct interdisciplinary research related to energy and climate change policies and serves on the steering committee of UF’s Florida Institute for Sustainable Energy. I also collaborates with faculty at other universities around the state of Florida as part of the Florida Energy Systems Consortium, a consortium created by the governor to leverage the expertise of Florida’s research community. In addition, I assist in the coordination of Florida’s hurricane hardening efforts.

In collaboration with the World Bank staff, I design curriculum and lead sessions of the PURC/World Bank International Training Program on Utility Regulation and Strategy. I have also designed, and currently deliver, PURC’s advanced pricing program, course in regulatory impact analysis and public-private partnerships. I have also designed and delivered customized training courses for regulators and operators in the Gambia, Nigeria, Uganda, Rwanda, Tanzania, Ghana, and throughout the world. These programs have educated over 3000 utility professionals from over 150 different countries.

Previously, I was a senior structuring and pricing analyst at The Energy Authority in Jacksonville, Florida where I developed proprietary models relating to the management of system-wide cash flows at risk, including the quantification of portfolio risk related to both physical utility and financial assets. I also built custom software packages to quantify cross commodity risk, valuation, and

optimization of natural gas storage with dynamic programming. I was a senior economist at SVBK Consulting Group in Orlando, Florida. Some of my duties included participating in legal proceedings relating to the restructuring of electricity markets and helping municipal electric, natural gas, and water/wastewater utilities develop retail rates.

I have carefully examined the documents sent to me and I start by expressing my enthusiasm for this initiative and the manner in which it is addressing the development of human capital in Africa. The energy sector in Africa is growing rapidly and a clear understanding of the economics and regulation of this sector is critical to the decision-making process that will facilitate this growth. Well-trained professionals are integral to this effort and I believe that the program will be very well received by participants as well as the worldwide community.

PURC has enjoyed the participation of hundreds of regulators and operators from Africa in our programs, and I have always been impressed by their willingness to discuss issues that are important to them and to learn from other systems. I have seen the impact that this education has on the energy infrastructure in Africa and I applaud the organizers efforts to offer education in this topics to a wider audience.

Regarding the contents, I find that the learning outcomes strike a balance between the theoretical and the practical, an important consideration for a Master's level program. The structure flows logically and covers the economics of the sector well down to the wholesale level. However, I would recommend additional emphasis on the retail level, as enumerated in my specific comments below.

I have two specific comments. I believe that Programme Learning Outcomes A4, A5, and A6 should be expanded, either implicitly or explicitly, to include energy utility finance and retail ratemaking. These topics can be easily incorporated into the existing modules, so no amendment of the module structure is necessary. A significant barrier to growth in the energy sector worldwide is, in some systems, a basic ignorance of the costs required to provide utility service and the design of rates that are sufficient to recover those costs. Education regarding these topics should include the components of the revenue requirement, the concepts, the importance, and the calculation, for providing service as well as the design of rates sufficient to recover those costs.

I further believe that Learning Outcome A3 and A6 should be expanded, either implicitly or explicitly, to include all elements of value in a utility system. Again, these topics can be easily incorporated into the existing modules, so no amendment of the module structure is necessary. As currently stated, these outcome seem (to me) to focus solely on the financial aspects of the energy infrastructure. However, consumers derive value in a system from more than just low prices. Improved service quality and accessibility, as well as system sustainability, are all sources of value. However, improvements in these areas generally come with increased costs and it is important for students to be able to quantify and value this tradeoff in order to inform and educate policy makers.

In summary, I very strongly recommend approval of the proposed Master of Science degree in Energy Economics, with my suggestions and recommendations non-mandatory.

Please let me know if there is anything else I can do to help.

Sincerely,

A handwritten signature in black ink, reading "Theodore J. Kury". The signature is fluid and cursive, with the first name "Theodore" being more prominent and the last name "Kury" following in a similar style.

Theodore J. Kury, Ph. D
Director of Energy Studies
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